



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**

*National Marine Fisheries Service*

*P.O. Box 21668*

*Juneau, Alaska 99802-1668*

December 27, 2007

Colonel Kevin J. Wilson  
District Engineer  
U.S. Army Corps of Engineers  
P.O. Box 6898  
Anchorage, Alaska 99506-0898

Re: POA-1922-22-D  
Tongass Narrows

Attn: Nicole Hayes

Dear Colonel Wilson:

The National Marine Fisheries Service (NMFS) has reviewed the above referenced application from the City of Ketchikan to replace approximately 160 creosote timber piles with approximately 120, 18-inch diameter steel piles for the Berth I and II structures. Existing timber piles will be cut off at the mudline and disposed upland. Undamaged timber piles or undamaged sections of the timber piles that are found to be salvageable will be used at replacement pile locations where there is exposed bedrock and where the pile will be less than approximately twenty feet in length. These timber piles will be supported on a cast in place concrete footing. Additional repair work includes repairing approximately 300 linear feet of pile caps and replacing approximately 200 stringers to maintain the structural integrity of the dock. In addition, up to ten percent more piles may need replacement.

We offer the following comments specific to the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), the Marine Mammal Protection Act (MMPA) and the Endangered Species Act (ESA).

Essential Fish Habitat

Section 305(b) of the MSFCMA requires federal agencies to consult with NMFS on all actions that may adversely affect Essential Fish Habitat (EFH). NMFS is required to make EFH Conservation Recommendations, which may include measures to avoid, minimize, mitigate or otherwise offset adverse effects.

Juvenile salmon use the inshore area of Tongass Narrows during spring and early summer for feeding and predator avoidance prior to migration out to sea. The inshore area of the project location also provides important habitat for several marine species Pacific cod, arrowtooth flounder, walleye pollock, dusky rockfish, shortraker/ rougheye rockfish, yelloweye rockfish, Pacific Ocean Perch, skates, and sculpins.



NMFS supports the applicant's proposal to drive piles with a vibratory hammer. Pile driving can generate intense underwater sound pressure waves that can injure or kill fish (Longmuir and Lively 2001, Stotz and Colby 2001). Vibratory hammers produce less intense sounds than impact hammers (NMFS 2005). Fish have been observed to avoid sounds similar to those produced by vibratory hammers and to remain within the field of harmful sound associated with an impact hammer (Dolat 1997).

NMFS supports the proposal to replace the existing creosote timber piles with steel piles. NMFS is concerned with the proposal to cut the existing creosote piles off at the mudline and to reuse undamaged timber piles or undamaged sections of timber piles. Creosote is a wood preservative typically composed of 85% polycyclic aromatic hydrocarbons (PAH), 10% phenolics, and 5% heterocyclic compounds (Munro, K.A. 2001). Creosote can be a significant source of PAH to marine water. Diffusion of PAH from creosote treated wood is a long-term process that may last the life of the product (Poston, 2001). Pilings over 50 years old still contain sufficient amounts of creosote to kill herring embryos (Vines, et. al., 2000). NMFS research has shown that herring and salmon embryos are sensitive to PAH contamination with morphological defects occurring at PAH concentrations of 3 parts per billion and lower. Based on these findings, NMFS has concluded that continued use of creosote would adversely affect EFH.

In accordance with Section 305(b)(4)(A) of the MSFCMA, NMFS makes the following EFH Conservation Recommendations:

1. Drive piles during low tide as much as possible. Potentially harmful sound pressure waves are attenuated more rapidly in shallow water than in deep water (Rogers and Cox 1988). If an impact hammer is required because of substrate type or the need for seismic stability, piles should be driven as deep as possible with a vibratory hammer before the impact hammer is used.
2. As much as feasible the creosote pilings should be completely removed from the marine water instead of being cut off at the mudline and left in place. In addition, NMFS recommends disposing all of the used creosote piles in an approved upland site and not reusing them in marine waters.
3. The use of any wood that has been surface or pressure-treated with creosote or treated with pentachlorophenol should be prohibited from being used where they would be in contact with marine water. Alternatives to treated wood that have no or reduced toxicity should be used wherever practicable. If treated wood must be used, any wood that comes in contact with marine or aquatic environments should be treated with waterborne preservatives approved for use in aquatic and/or marine environments. These include, but are not limited to: Chromated Copper Arsenic (CCA) Type C, Ammoniacal Copper Zinc Arsenate (ACZA), Alkaline Copper Quat (ACQ), Copper Boron Azole (CBA) or Copper Azole (CA). The applicant should only use wood that has been treated in accordance with best management practices developed by the Western Wood Preservers Institute. Treated wood should be inspected before installation to ensure that no superficial deposits of preservative material occur on the wood.

4. All cutting and boring of treated wood should take place in upland areas; all waste materials must be kept out of the aquatic environment and be properly disposed of upland. Treated wood materials should not be stored in-water. Any cut wood, chips or sawdust from treated wood that enters the aquatic environment should be collected promptly and disposed of at an acceptable upland site.
5. No in-water work should be permitted from April 1 through June 15 of any year to protect out-migrating salmon and spawning and rearing Pacific herring.
6. NMFS recommends that reasonable precautions be taken to prevent incidental and accidental discharge of petroleum products and other contaminants. An emergency oil spill response kit or other appropriate equipment such as absorbent pads should be available on site to allow fast response to small oil spills and accidental discharge of hydrocarbon contaminated bilge waters.

Under section 305(b)(4) of the Magnuson-Stevens Act, the Corps is required to respond to NMFS EFH Conservation Recommendations in writing within 30 days. If the Corps will not make a decision within 30 days of receiving NMFS EFH Conservation Recommendations, the Corps should provide NMFS with a letter within 30 days to that effect, and indicate when a full response will be provided.

#### Threatened and Endangered Species/Marine Mammals

The project is within the range of the endangered humpback whale and the threatened Steller sea lion, as well as harbor and Dall's porpoises, harbor seals, and minke and killer whales, which are protected under the MMPA. All of these species may occur in the marine waters near Ketchikan at any time of year on an opportunistic basis.

The MMPA and the ESA prohibit the injury, harm or harassment of marine mammals. Pile driving introduces high levels of impulsive noise into the water column, with the potential to harass or injure marine mammals. Sound pressure levels (SPLs) in the range of 130-135 dB re: 1 $\mu$ Pa have been measured up to one kilometer from an active pile driver (Johnson et. al., 1986). Humpback whales have been observed to react to SPLs greater than 115-129 dB re: 1 $\mu$ Pa within 200 meters of a sound source. Reyff (2003) measured SPLs of 159 dB re: 1 $\mu$ Pa about 200 meters from a pile driver driving 14-inch diameter hollow steel piles. NMFS normally considers harassment takes to begin at received levels of 160 dB.

NMFS recommends that pile driving not occur if any marine mammals are observed within 200 meters of the platform to reduce the possibility for harassment or injury to marine mammals. The operator must scan the area for the presence of marine mammals. If marine mammals are sighted within 200 meters of the sound source or are observed to be disturbed by the activity at any distance, pile driving must cease until the animals leave the immediate area.

If you have any questions regarding our recommendations for this project, please contact Cindy Hartmann at 907-586-7585 or [cindy.hartmann@noaa.gov](mailto:cindy.hartmann@noaa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read 'James W. Balsiger', with a flourish extending to the right. To the right of the signature, the initials 'for JTB' are written in a smaller, less legible hand.

James W. Balsiger  
Administrator, Alaska Region

cc: City of Ketchikan, 334 Front St., Ketchikan, AK 99901  
EPA Juneau, Chris Meade\*  
ADNR, Mark Minnillo\*  
USFWS Juneau, Richard Enriquez\*  
ADCOM, Joe Donohue\*  
ADF&G, Juneau, Tom Schumacher\*  
COE, Anchorage, Nicole Hayes\*  
NMFS, Protected Resources Division, Juneau, Kaja Brix and Aleria Jensen\*

\* e-mail PDF

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Cindy Hartmann

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